Supplementary Table 4. Patient and Tumor Characteristics

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| --- | --- | --- |
| Factor | N | % |
| Age (years) Median Range | 5129-88 |  |
| Histology IDC ILC Mixed Other |  41 31 5  | 82%6%2%10% |
| Clinical Stage I II III |  9347 | 18% 68%14% |
| Nuclear gradeǂ 1 2 3 | 121715  | 27%39%34% |
| Tumor subtype ER+ or PR+ and HER2 –HER2 +Triple negative | 398  3  | 78%16%6% |
| Lymphovascular invasion Present Absent/Unknown | 1832 | 36%64% |
| Multifocal/multicentric disease Yes No | 8 42  | 16%84% |
| Neoadjuvant chemotherapy No Yes  | 3911  | 78%22% |
| Surgery performed Breast conservation Mastectomy Modified radical mastectomy | 10 31 9  | 20%62%18% |
| Time to specimen freezing (min) Median Range | 378-157 |  |
| Pathology size\* (cm) Mean Median Range | 3.62.80.7-11 |  |
| Pathologic nodal status Positive Negative | 28 22  | 56%44% |

ǂ there are 6 cases where nuclear grade was not given in the pathology report.

\*For patients with multifocal or multicentric disease, the tumor size and characteristics of the tumor that was biopsied was noted.